

January 2009 Update

## **Rocky Mountain Arsenal Superfund Site**

Adams County, Colorado  
(5-Year Review Date: 11/27/07)

### ***H**ighlights Since the 2007 Five-Year Review*

- An extraction well was added at Bedrock Ridge to capture the groundwater plume there.
- A State Engineer's Office well notification program is being implemented as prescribed by the Record of Decision (ROD).

**Brief Site History:** The Army established Rocky Mountain Arsenal (RMA) in 1942 to manufacture chemical weapons used in World War II. Following the war and through the early 1980's, the Army continued to use these facilities. Beginning in 1946, some RMA facilities were leased to private companies to manufacture industrial and agricultural chemicals. Shell, the principal lessee, manufactured pesticides at RMA from 1952 to 1982. Common industrial and waste disposal practices during these years resulted in significant levels of contamination. Investigations identified chemicals at more than 180 sites contaminating soil, ditches, stream and lakebed sediments, sewers, groundwater, surface water, biota and structures. Unexploded ordnance has been identified at several locations on-site.

As of the publication of the 2005 Five-Year Review Report, nearly eighty percent of RMA was deleted from the National Priorities List (NPL) and more than twelve thousand acres transferred to the United States Fish and Wildlife Service. The official establishment of the Rocky Mountain Arsenal National Wildlife Refuge occurred April 21, 2004 creating one of the largest urban refuges in the United States. The refuge is home to more than 330 species of animals. A small herd of wild bison were introduced to the refuge in March 2007.

**Cleanup Activities Completed:** There were 31 projects for soils, structures, and the treatment of groundwater to address at RMA, as dictated by the ROD. Nearly all of these projects are complete or ongoing.

**Current Status:** Currently crews are installing integrated cover systems over waste left in place. In addition, groundwater monitoring continues through the operation of the boundary and on-site treatment systems. The next five-year review should be conducted in 2010 covering the period April 1, 2005 through March 31, 2010.

**Summary of Protectiveness:** All controls are in place to adequately minimize risks. Because the remedial actions at both the on-Post and off-Post OUs are expected to be protective of human health and the environment upon completion, the remedy for the entire site is expected to be protective of both human health and the environment.

**Issues Impacting Protectiveness:** No issues were identified that affected the ongoing protectiveness of the remedy. The following issues have been identified to ensure continued protectiveness.

**Rocky Mountain Arsenal Superfund Site  
Five-Year Review 2009 Update Table  
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<b>Issues</b>	<b>Recommendations/ Follow-Up Actions</b>	<b>Follow-Up Actions (Status/Due Date)</b>	<b>Status of Follow-Up Actions 01/09</b>	<b>Responsible Party</b>
1) Off-Post monitoring well maintenance and security.	Continue routine inspections and maintenance of off-Post monitoring wells.	2009 Long-Term Groundwater Monitoring Plan (LTMP)	Ongoing December 2009	Remedial Venture Office (RVO)
2) Extraction well and extraction system shut-off criteria	Evaluate the need to revise the shut-off criteria during LTMP preparation and modify criteria as necessary.	2009 LTMP	Ongoing December 2009	RVO
3) Establishing site-specific Practical Quantitation Limits (PQLs).	Develop procedure for establishing PQLs in accordance with available guidance. Evaluate need to make changes to lab procedures.	2010	Ongoing 2010	RVO
4) Bedrock Ridge plume capture	Extraction well was added. Performance will be monitored by the RMA Water Team.	Done	Done 9/30/2008	RVO
5) Shell Disposal Trenches dewatering goals.	Re-evaluate dewatering goals after cover is in place.	After cover construction completed 1/5/09	Cover constructed on 1/5/09 Assessment ongoing	RVO
6) Off-Post Groundwater Intercept and Treatment System (OGITS) performance objectives clarification	The inconsistencies in the off-Post ROD and other documents that allow for different interpretations of whether OGITS is a mass removal system or containment system will be clarified.	2009 LTMP	Ongoing	RVO

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7) Northern Pathway System modification	System will be modified to allow development in the area to proceed. Design goals will ensure that system effectiveness meets or exceeds that of the current design.	Still ongoing.  Likely to be a 2010 Five-Year Review Report issue.	Ongoing	RVO
8) North plants fuel release	Need to identify whether additional groundwater characterization and/or remediation is needed.	Characterization/ Pilot Study 2009	Ongoing	RVO
9) Changes in monitoring network	The groundwater and surface water monitoring programs will be revised as necessary to meet current and future remedy needs, and monitoring termination criteria will be modified as necessary.	2009 LTMP	Ongoing	RVO
10) Operational Assessment Report (OAR) schedule	The OARs will be issued within one year of the period covered by the report.	OARs are current through 2007 reporting year.	Done	RVO
11) State Engineer's Office well notification program	Tri-County Health Department (TCHD) will provide oversight for the program to ensure that this institutional control is implemented according to the ROD.	February 2006	Ongoing	TCHD/RVO